511 Regional Rideshare Program

Standard Operating Procedures

Information Technology Department

Version	Document Description	Date
1.0	Initial Draft	June 2006
1.1	MTC Review	July 2006
1.2	Response to MTC Review	December 15, 2006
2.0	Add Fringe Counties to Crystal Reporting	March 20, 2007
2.1	Phone Hours, Harassment calls, P&R/HOV Map	June 30, 2007
3.0	Create and reference document "Replicating RMS and Rideshare Database for Reports" Removed threatening call action steps (keep reporting)	May 22, 2008
3.1	Update Support phone numbers	June 23, 2008
4.0	Add Postage Meter instructions	March 18, 2009
4.1	Strip any password listed and reference IT password database.	April 16, 2009
5.0	Yearly updates	April 16, 2010
5.1	Incorporate MTC Updates	July 30, 2010
5.2	Incorporate Schoolpool and other updates	October 5, 2010

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511 RIDEMATCH SERVICE (RMS)

The 511 RideMatch Service (RMS) is a self-serve Internet-based ridematching service that gives end-users the power to customize their searches for sharing a carpool or vanpool to work – without any human intervention. The RMS provides a secure login to a confidential database that has a self-cleaning mechanism to ensure the database has only active members (those that have clicked-through their activation email). The system is available at (https://www.ridematch.511.org or https://ridematch.511.org). On-line match profiles are available 24-hours a day, 365 days a year and provide visual mapping.

- **Manufacturer/Developer**
  The Ridematch program is completely owned by MTC and the Rideshare Program. The main coding in the application is based on a product called Base Commute Premium, developed by Base Technologies, Inc. which is a completely open source web-based Ridematching and Commuter Management Transportation Demand Management (TDM) software application. An annual maintenance agreement is maintained with Base Technologies, Inc. (BTI). All anomalies experienced, either through staff monitoring or end-user notification are dispatched immediately to Base Technologies for resolution. Per the maintenance agreement, It is expected BTI to respond immediately during normal business hours. Additionally, one of three BTI staff is to be available via cell phone afterhours 7-days a week.

  Contact: Base Technologies, Inc.
  1749 Old Meadow Road, Suite 500
  McLean, Virginia 22102
  (703)848-2400

RMS Emergency Contact List			
Name	Email	Office	Cell
[redacted]	[redacted]	[redacted]	[redacted]

- **Hosting, Backup, and Security**
  The RMS is located on (two) Rideshare program owned servers in the MTC Co-location facility in Sacramento. One server handles the web application and the other houses the Ridematching database. Backup and Simple Network Management Protocol (SNMP) monitoring of servers are performed by MTC's 511 Traffic/Transit contractor. Nightly backups are performed with copies stored offsite. Monitoring notifications are sent to RRP IT Manager and application developers shown in contact list above. The RMS site employs site security via Verisign's Secure Sockets Layer (SSL) certificate.

Hosting Emergency Contact List		
Name	Email	Phone
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]

- **Server Specs**
  - RideMatch1 (Web Application)
    IP Address
    - Public: [redacted] >> Local: [redacted]
    - Public: [redacted] >> Local: [redacted]

    Hardware
    - (2) Quad Core 2.2 Ghz Processors
    - 8GB Memory
    - (4) 146G Hard Drives in RAID-5 environment
    - Dual NIC
    - Redundant Power Supplies

    Software
    - MS Windows 2003 Server 64-bit
    - Apache
    - JBoss Middleware
  - RideMatch2 (Web Application)
    IP Address
    - Public: [redacted] >> Local: [redacted]
    - Public [redacted] >> Local: [redacted]

    Hardware
    - (2) Quad Core 2.2 Ghz Processors
    - 8GB Memory
    - (4) 146G Hard Drives in RAID-5 environment
    - Dual NIC
    - Redundant Power Supplies

    Software
    - MS Windows 2003 Server 64-bit
    - PopstGres SQL Database w/GIS extensions

- **Process Guides**
  Instructional process guides are maintained for use by System Administrators, Rideshare Administrators, Vanpool Administrators, and Employee Transportation Coordinators (ETC's). See appendix A-D for process name and file location.

- **Ridematch Admin Access**
  The 511 RRP performs administrative Database functions such as managing commuter, employer, and agency records; incentives, special events, park and ride lot information; etc. To accomplish this, there are five administrative access levels in

the online RMS System. For current listing of names and their associated levels, see RMS Admin Access Report available through the built-in reporting system and viewable by System Administrators.

System Administrators (SYSAdmin)
- These administrators can change anything in the database and use all modules including skin creation, special event creation and content administration.
- Limited to 3 people at 511 RRP (IT Manager, Assistant IT, Commuter Services Manager) and Base technologies engineers

511 Rideshare Administrators (511RSAdmin)
- These administrators can add, delete, or change any commuter record. They can also manage and create company locations.
- Members: 511 Commuter Services Department Staff

Rideshare Administrators (RSAdmin)
- These administrators can add, delete, or change any commuter record. They can also manage and create company locations. These RSAdmins are identical to 511RSAdmins (above) except they do not have the database integrity reports.
- Members: Partner agency program operators and program operators outside the Bay Area (Santa Cruz, Monterey, and San Benito).

Vanpool Administrators (VPAdmin)
- These administrators are identical to RSAdmin (above) but have additional access to the Vanpool module where they can manage/create/delete Vanpools and associate commuters as VP drivers.
- Members: 3 people at 511 RRP and 3 people at Solano Napa Commuter information (SNCI) agency.

Employee Transportation Coordinator (ETC)
- These administrators can add, delete, or change commuter records that are affiliated with their company only.
- Members: Employee Transportation Coordinators.

- **Reports**
  Various built-in reports are available to admin users, based on their access level, when they are logged into the RMS system. See RMS reports Document (appendix E) for listing of current reports.

- **Database Consistency Checking and Purging**
  To maintain an accurate and up-to-date database, the 511 RRP checks for database consistency and regularly purges the database.

- Consistency checking process – The 511 RRP runs daily reports to show inaccurate (e.g. typos, misspellings) or duplicate records (e.g. same commuter registered more than once). A placement call is made and the inconsistencies are fixed through the admin interface.

- Purge Process –The Ridematch system is still in its initial build and enhancement process to meet RFP deliverables. The purge process will be determined after all features have been implemented.

- **Customizations**
  The Ridematch system is still in its initial build and enhancement process to meet RFP deliverables. A punchlist is maintained by the IT manager, for a listing of RMS customizations in progress, see RMS Customizations document (appendix F).

- **Skinning RMS**
  Local employers and agencies have expressed interest in obtaining ridematch software that has the look and feel of their companies/agency's intranet or web site. The 511 Ridematch Service can easily facilitate these requests. See the Skinning Guidelines and Procedures Document for further details (appendix H-I). These documents are also posted online at http://511.org/developer-resources.asp.

- **Event Matching**
  The 511 Ridematch service contains a special events module which enables users/commuters to match with other users for the purpose of forming carpool to unique events in the greater Bay Area Region. See the Event Matching documents for further details (appendix J)

511 SCHOOLPOOL SERVICE

The 511 Schoolpool Service is a self-serve Internet-based matching service that helps parents share the responsibility of getting children to school. The Schoolpool service matches parents who make similar school trips – whether it is by driving (Carpool), bicycling, or walking. The system is available at (https://www.schoolpool.511.org). On-line match profiles are available 24-hours a day, 365 days a year and provide visual mapping.

- **Manufacturer/Developer**
  The Schoolpool service is completely owned by MTC and the Rideshare Program. The main coding in the application is duplicated from the programs Ridematch service (RMS) and developed by Base Technologies, Inc. As with the Ridematch service (RMS) above, all anomalies experienced, either through staff monitoring or

end-user notification are dispatched immediately to Base Technologies for resolution. The Schoolpool maintenance is covered under the Ridematch agreement. See Rideshare service above for support contact numbers and information.

- **Hosting, Servers, and Application**
  The Schoolpool system resides on the same servers as the Ridematch System (RMS). Its web coding and database are backed-up along with the Ridematch (RMS) backup processes.

- **Admin Access**
  There is administrative access to manage participating schools, manage parents and children, and run reports. Currently, Schoolpool administration is being done by MTC. Schools desiring to participate are encouraged to go to the 511 suggestion form at http://511.org/about-511-suggestions.asp to notify MTC.

  System Administrators (SYSAdmin)
  - System administrators can add or change all records in the database. There is a school admin module where the sysadmin can add or change participating schools. There is also a parent admin module where the sysadmin can add new or change existing parents/childred information including running matchlists.
  - Members: 511 IT manager and delegated MTC staff member (currently 1).

- **Reports**
  Currently there is a report that shows parent participation and child participation.

- **Customizations**
  No process defined yet.

511 RIDESHARE WEB SITE

- **Hosting, Backup, and Security**
  The Rideshare Website is maintained on a rideshare program owned server co-located in the MTC Co-location facility in Sacramento. One server handles the web application and the other houses the database. Backup and Simple Network Management Protocol (SNMP) monitoring of the server is performed by MTC's 511 Traffic/Transit contractor. Nightly backups are performed with copies stored offsite. Additionally, a website copy is maintained by the Webmaster (see webmaster info below). Monitoring notifications are sent to the RRP IT Manager. The web site employs site security via Verisign's Secure Sockets Layer (SSL) certificate.

Hosting Emergency Contact List		
Name	Email	Phone
[redacted]	[redacted]	[redacted]

- **Server Specs**
  - RideShare1

    IP Address
    - Public: [redacted] >> Local: [redacted]
    - Public: [redacted] >> Local: [redacted]

    Hardware
    - (2) Quad Core 2.2 Ghz Processors
    - 8GB Memory
    - (4) 146G Hard Drives in RAID-5 environment
    - Dual NIC
    - Redundant Power Supplies

    Software
    - MS Windows 2003 Server 64-bit
    - IIS
    - .Net Framework
    - PHP
    - Perl
    - FastCGI
    - Urchin 6 (Tracking)

- **Web Master Info**
  The 511 RRP utilizes a preferred vendor to make website content and programming changes. The Marketing Manager coordinates this. See the Marketing SOP for further info.

- **Remote Access**
  FTP Account info and Remote Desktop Account info maintained in password database (appendix K).

- **Web Traffic Analytics**
  Web hits and tracking is monitored with a package called Urchin. The web stats can be accessed at: [redacted]. The admin password is maintained in the password database (appendix K).

- **Ticker/Scrolling News Promo**
  The web site has a feature to turn-on an area of the home page that can be used for news flashes, etc. The administration of this feature is accomplished in the following

manner: Go to the secure admin page here: [redacted]. Account info maintained in password database (appendix K).

- **Polls**
  The web site has a polls feature. This feature is used to engage website visitors by asking for their feedback on current events related to ridesharing. The administration of this feature is accomplished in the following manner: Go to the secure admin page here: [redacted] Account info maintained in password database (appendix K).

- **Download Page**
  The web site Download page utilizes content management built into the page where the 511 Rideshare Marketing and Communications staff can upload downloadable materials. The administration of this feature is accomplished in the following manner: Go to the secure admin page here: [redacted]. Account info maintained in password database (appendix K).

- **Newsroom**
  The web site Newsroom page utilizes content management built into the page where the 511 Marketing and Communications staff can make changes at will. The administration of this feature is accomplished in the following manner: Go to the secure admin page here: [redacted]. Account info maintained in password database (appendix K).

- **Vans with Open Seats**
  The web site Webvan page utilizes content management built into the page where the Vanpool staff can update/add/remove critical vanpools (those having open seats). The administration of this feature is accomplished in the following manner: Go to the secure admin page here: [redacted]. Account info maintained in password database (appendix K).

- **HOV – Park and Ride Lot Map Changes**
  The web site includes an interactive map showing 2 and 3-person HOV lanes, Park and Ride lots, and Bridge toll information [redacted]. Adds, moves, and changes can be accomplished in the following manner: Go to the secure admin page here: [redacted]. Account info maintained in password database (appendix K). The map tools include a feature to turn on/off map features such as the Park and Ride lot icons, Bridge Toll Icons, HOV icons and the HOV graphic line. The HOV graphic line overlay is implemented by the developer; [redacted] Their contact number is [redacted].

DOMAIN NAME REGISTRATION

www.Rideshare.511.org – Rideshare Web Site
www.ridematch.511.org – Ridematch Service login
www.schoolpool.511.org – Schoolpool Service Login
* 511.org domain is managed by the 511 Traffic Contractor's System Admin. Contact [redacted].

RIDESHARE EMAIL

Rideshare.511.org email forwards and distribution lists that are managed by the 511 Traffic Contractor. Send distribution list change requests to: [redacted] and copy [redacted], MTC's 511 Website Coordinator.

- **Staff Alias/Forwards**
  After PB email is acquired, request to 511 Traffic Contractor to create a [pbid]@rideshare.511.org alias forwarding to the PB email name.

- **Group Distribution Lists**
  The following distribution groups are maintained. See file folder for members of each group.

SECURE SOCKET LAYER (SSL) CERTIFICATE

The program maintains SSL certificate with 128bit encryption on the RMS Website and the Rideshare Website. The SSL creates an encrypted link between a web server and a web browser (applicant). The link ensures that all data passed between the web server and browser remains **private and secure** and is **recognized by millions of consumers** by a secure padlock which appears in their browser

The certificate provider is VerSign, Inc. http://www.verisign.com

Common name: WWW.RIDEMATCH.511.ORG
Organization: PB Americas, Inc
Organizational unit: RIDESHARE
Expires 5/31 every third year starting in year 2008

Common name: WWW.SCHOOLPOOL.511.ORG
Organization: PB Americas, Inc
Organizational unit: RIDESHARE
Expires 6/20 every second year starting in year 2010

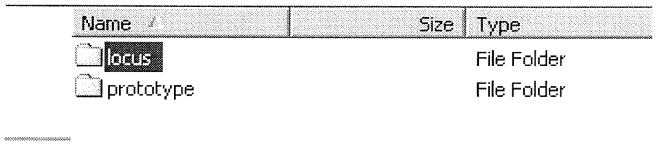
Common name: WWW.RIDESHARE.511.ORG
Organization: PB Americas, Inc
Organizational unit: RIDESHARE
Expires 8/22 every third year starting in year 2008

ON-LINE SURVEYS

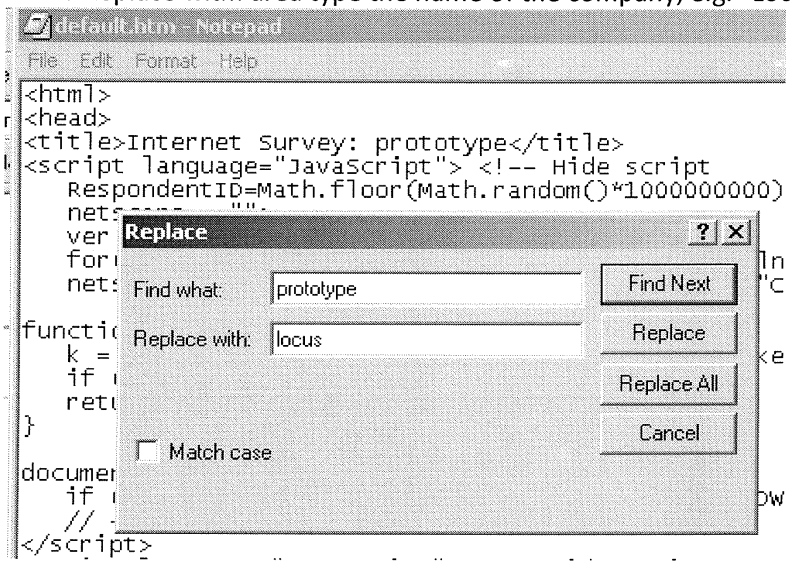
Employee Transportation Surveys are requested through our Employer Services Reps. There are 5 survey types/templates; Standard, Expanded Schedule, Relocation, Shuttle, EcoPass.

- **Creating a New Employee Transportation Survey**
  The survey files are kept in the "R:\information technology\on-line Survey/templates" folder.
  - **Create new folder containing the production files.**
    1. Right-click on the desired template folder and select copy.
    2. Right-click in the work area and select paste.

    A new folder was created. This folder contains the files you will modify for the production site.
    3. Rename the folder to the name of the survey company. For example, if the company were called "Locus", name the folder "locus".



- **Modify/personalize the survey form to the company name**
  4. Open the folder just created, in this case locus.
  5. Right click on the file "default.htm" and select "open with" and use Notepad.
  6. In Notepad, click Edit-Replace (or use CTRL+H) to display a search and replace box.
  7. In the Find what: area type "prototype"
  8. In the Replace with: area type the name of the company, e.g. "Locus"



  9. Click "Find Next" to find the first instance and select "Replace" to modify the text. The cursor will automatically jump to the next matching text, select "Replace" to modify that test. There will be three total replacements.
  10. When finished, close the "replace dialog box" and close Notepad saving the changes.
  11. Do the same thing for the file "survey.pl". There will be one place where the word "prototype" needs to be replaced.

- **Posting the survey to the web server**
  Surveys are posted to the web servers "Survey" folder using an ftp client. The host, username, and password are available in the IT Password Database (appendix K).

  That's it; the survey is now live.

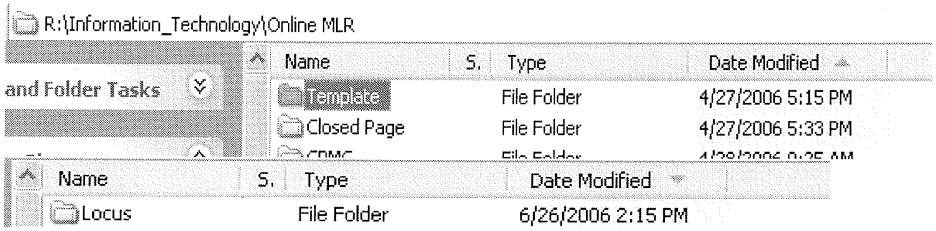
- **Survey URL Address**
  The url survey participants will enter into their browser is:
  http://rideshare.511.org/survey/[comapny].
  In this example it would be http://rideshare.511.org/survey/locus .

- **Reading Survey Data**
  Once the survey is completed, survey participant's data is posted [redacted] The evaluation manager, who analyses the data, will retrieve the data in one of two ways.
  [redacted]

ON-LINE MATCHLIST REQUESTS (MLR)

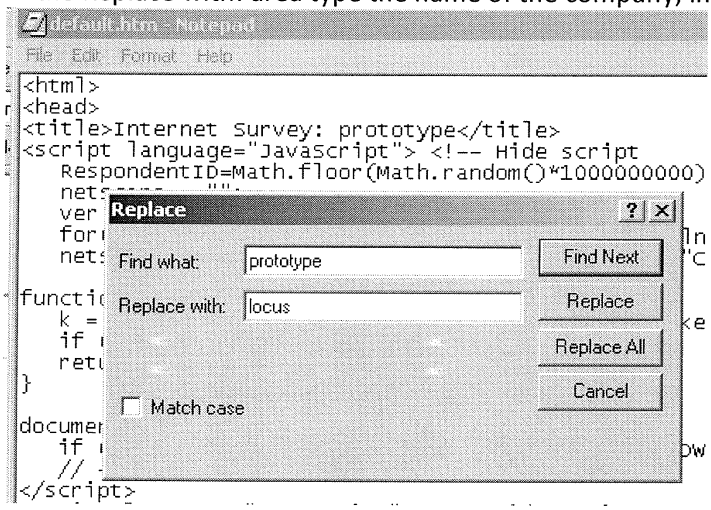
- **Creating a New On-Line Matchlist Request Form**
  The template MLR is located in the Information Technology Public area in a folder called "online MLR".
  - **Create new production files**
    1. Right-click on the template folder and select copy.
    2. Right-click in the work area and select paste.
       A new folder was created. This folder contains the files you will modify for the production site.

    Rename the folder to the name of the MLR company. For example, if the company were called "Locus", name the folder "locus".



  - **Modify/personalize the MLR form to the company name**
    3. Open the folder you just created, in this case locus.
    4. Right click on the file "default.htm" and select "open with" and use Notepad.

5. In Notepad, click Edit-Replace (or use CTRL+H) to display a search and replace box.
6. In the Find what: area type "prototype"
7. In the Replace with: area type the name of the company, in this case "Locus".



8. Click "Find Next" to find the first instance and select "Replace" to modify the text. The cursor will automatically jump to the next matching text, select "Replace" to modify that text.
9. When finished, close the "replace dialog box" and close Notepad saving the changes.
10. Do the same thing for the file "survey.pl". There will be one place where the word "prototype" needs to be replaced.

- **Formatting the MLR to match the company**

If time permits, customize the MLR to match the company's web site. Open the file in Adobe Go-live. Copy the header graphics from the company's web page and place in the MLR header. Change background colors accordingly.

File modifications are complete!

- **Posting the Request to the Web server**

MLR's are posted to the web servers "MLR" folder using an ftp client. The host, username, and password are available in the IT Password Database (appendix K).

- **URL Address**

The url MLR participants will enter into their browser is:
http://rideshare.511.org/MLR/[company].
In this example it would be http://rideshare.511.org/mlr/locus .

- **Downloading MLR Data and closing the event**
  At the end of the event, the data is downloaded and sent to the Commuter Services Group for entry into the RMS system. Additionally, an Event Closed page is posted in place of the MLR request page.

  1. [redacted].
  2. Highlight and copy the data to clipboard.
  3. Start Notepad and paste in the data. Save the file to desktop. Use the event name as the text file name.
  4. Start Excel, File-Open and browse to the desktop and select the file.
  5. Follow the delineated wizard placing the pipe symbol | in the other field.
  6. Save the file as Excel (.xls). Again use the event name as the file name. The save location should be the same location as the event form files. The location is R:\Information_Technology\Online MLR\[name].
  7. Open the excel data file (if not still open), and open the excel file "Data Key.xls" located in the folder R:\Information_Technology\Online MLR.
  8. Copy the header row text from the Data Key.xls file to the new Event file.
  9. Resave the event Excel file and email to the Commuter Services Lead.
  10. Post the "Event Closed" page by copying the file R:\Information_Technology\Online MLR\Closed Page\default.htm over the default.htm file in the on-line web folder.

PHONE SYSTEM

The 511 RRP maintains a call center to handle Rideshare, Airport, and Bicycling calls forwarded from the main 511 phone system.

- **Manufacturer**
  Avaya IP Office 406 Base unit, IP 400 Expansion Module, 5410 Digital handsets, Voice Mail Pro Server, CCC Compact Contact Center Server for Reporting and Wallboards.

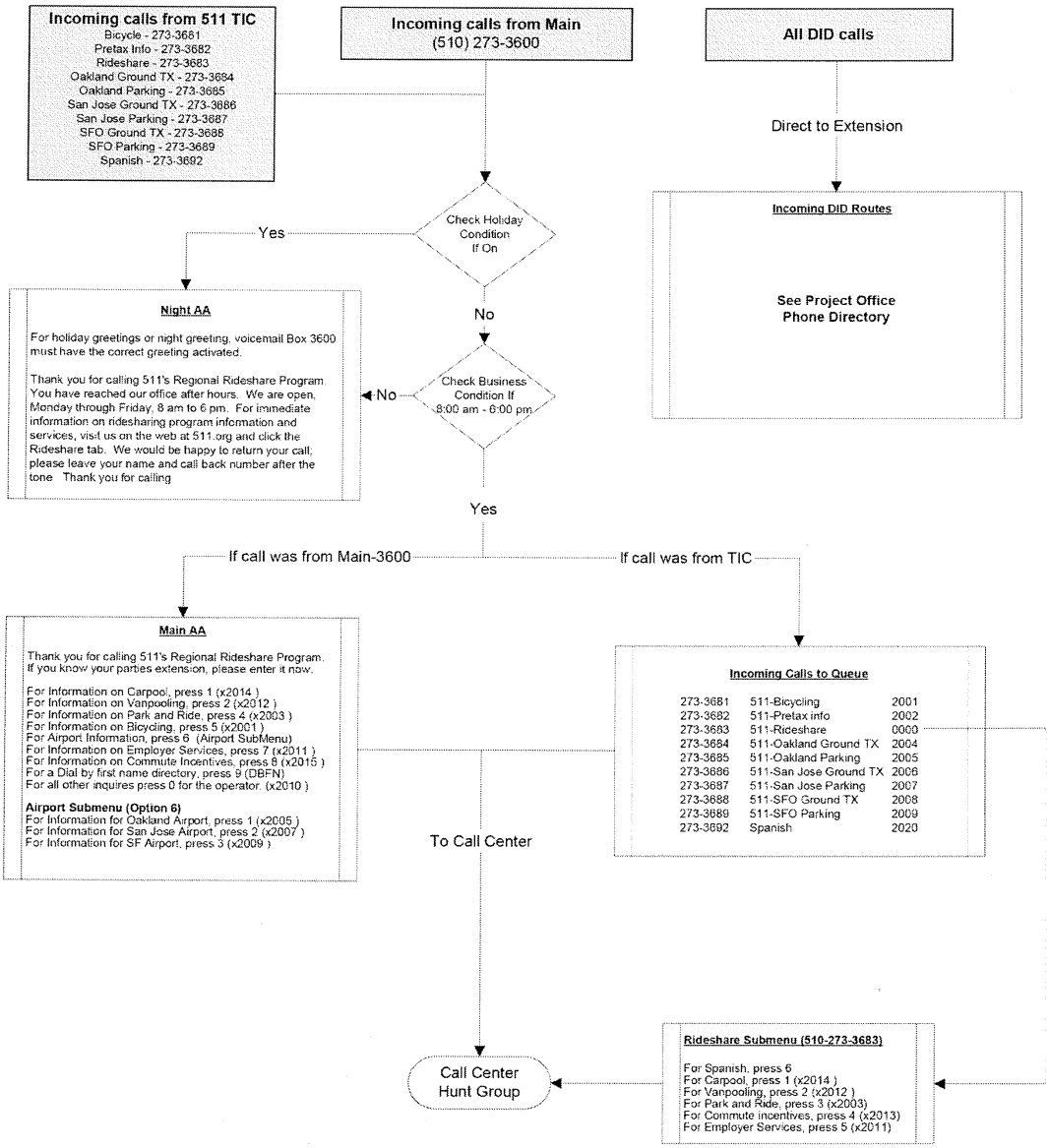
- **Support Numbers**

Device	Provider	Hours/Support_Type	Phone	Account
Phone (Avaya) Hardware	Avaya Maintenance	[redacted]	[redacted]	[redacted]
Phone (Avaya) Programming	Netspeed Solutions	[redacted]	[redacted]	[redacted]

- **Call Flow**

Incoming Call Routes

511 Regional Rideshare Program
70 Washington Street, Ste 407
Oakland, CA 946077



- **Reporting**
  - **Avaya Compact Contact Center (CCC) Reports**
    There is a server dedicated to call tracking and reporting. The CCC Server is accessed through KVM switch # 4 (*see IT password database for login information - appendix K).* Four (4) reports have been programmed to automatically run and print-out results each Monday which the Commuter Services Manager picks-up to monitor call center statistics. Two (2) reports have been programmed to automatically run and print-out results on the first day of the month which the IT manager uses to update the "511 Hunt Group – Calls Answered" spreadsheet maintained in the IT public folder. A copy of the spreadsheet is sent to the Evaluation Manager each month for Report Card entry. Many additional canned reports are available.

  - **TIC Stats Web Reports**
    MTC supplies reports detailing 511 Calls transferred from 511 to the RRP system are available at [redacted]
    Account and password info available in IT password database (see appendix K).
    Each month the IT manager downloads the two reports for entry in to the monthly progress report.

- **Circuit/Account Numbers**

Circuit	Provider	Support Number	Account
PRI Circuits	SBC	800-332-1321	[redacted]
PRI Usage	SBC	800-332-1321	
Analog Lines	SBC	800-332-1321	
DSL – Oakland	SBC	877-722-3755	
DSL – Furnas	SBC	877-722-3755	
DSL-Lesmeister	SBC	877-722-3755	

- **Power Outage**
  When a power outage happens, there is an Uninterruptible Power Supply – Battery Backup (UPS) that keeps the entire phone system, auto attendant server, and CCC server, alive for a short period. The UPS will automatically shut the systems down in 5-7 minutes. The IT manager may monitor the process as it happens or as it is scheduled. When power is restored, the two ivory-colored servers must be started by pressing the power buttons on the front covers (there is no remote process for power-up).

- **Sending hunt group call to voice mail during Holiday**
  This process is performed by the Commuter Services Department (CSD). See the CSD SOP for detailed steps.

- **Change Call Answer Hours during Emergency**
  This process is performed by the Commuter Services Department (CSD). See the CSD SOP for detailed steps.

- **Threatening Calls Accessing Phone Reports for Call Detail**

  In the event of a threatening call, a phone report will be needed to verify the time, origin, and destination of the call. Following is the procedure to produce the report.

  1. Log into the Voice Mail Server (KVM # 3)
     a. Press the KVM switch until #3 is lit. This means you are monitoring the correct server.
     b. Login: Username is "[redacted]", password maintained in IT password database (appendix K).
  2. Run the CCC Report application.
     a. On the desktop, double-click the ***CCC Reports*** icon. Or you can go to ***Start - Programs - CCC - CCCReports***.
  3. Run the Incoming Call Report
     a. Click ***ICLID Reports*** to show listing of ICLID reports.
     b. Click the ***Customer Tracking by ICLID*** report. This report will display a detail listing of calls showing the date/time, incoming number, direction, duration, DID number, and the call number.
     c. Select the ***date/day range***
     d. Select the ***time of day***. Usually you will leave this default to show the entire 24-hour day.
     e. Enter ***ICLID From***. Enter ***1***.
     f. Enter ***ICLID To***. Enter ***9999999999***.
     g. Click ***OK***
     h. Print report
  4. Examine the report
     a. Perusing the printed report, you can find the detailed call information.
     b. The ***Time*** column shows the time the call was received.
     c. The ***ICLID*** column shows the originating number.
     d. The ***DID number*** column shows the destination extension. This report shows all calls – you will want to concentrate on numbers 3681 through 3692.

  - **Voice Mail Wav Files**
    If the call is on the voice mail system, you can copy and retain the file. The call will either be in the ***511 Queue*** VM box or the ***3600 Main*** VM box.

1. At your computer go to ***Start – Run*** and type the following into the box: [redacted]
2. A login box will appear and you need to login in as "[redacted]", password maintained in IT Password Database (appendix K).
3. A file browser will open; browse to the location of the wav file and compare the file date of the wav file to the time on the call report to ensure you copy the correct one.
4. If the message is in the ***511 VM Queue*** go to [redacted] and copy the wav file to your computer.
5. If the message is in the ***Main (3600)*** go to [redacted] and copy the wav file to your computer.

- **Phone System Backup**
  Backups on Avaya phone servers are by automated copy of program files to shared folder on server \\rrp-db1\phone_system_backups.

PROJECT OFFICE NETWORK

- **DSL WAN Conectivity**
  Provider = SBC; Our DSL# is [redacted]
  Router Access: *IP Address, Account and password listed in IT password database (appendix K).*

- **Virtual Private network (VPN) Access**
  RRP staff can access the RRP servers through VPN access. VPN is provided through a Cisco PIX firewall with a VPN client installed on the remote machine. The IT manager will approve, install, and configure the remote client.

- **Network Diagram**
  Private document maintained by IT manager (appendix L)

- **Office Cabling**
  Each location shown in the diagram below has (2) Cat5e Data, A&B, and (2) Voice, A&B, terminating to a rack-mount patch panels. See diagram maintained by IT Manager (appendix M)

- **INTERNAL PROJECT SERVERS**
  - System Requirements

- RRP-FS1
  - Dell 2650
  - 2.6Ghz Xeon
  - 2Gb RAM
  - (4) 36Gb hot-swap Drives in Raid 5 config
  - Windows 2000
  - Active Directory Peer
  - DNS Forwarder
  - DHCP Pool [redacted]
  - File and Print Server
- RRP-DB1
  - Dell 2650
  - 2.6Ghz Xeon
  - 2Gb RAM
  - (4) 36Gb hot-swap Drives in Raid 5 config
  - Windows 2000
  - Active Directory Peer
  - DNS Forwarder
  - DHCP Pool [redacted]
  - Database Server
  - MS Sql
  - FileMaker Pro

- **Backup Procedures**

The Regional Rideshare Program maintains daily, weekly, and quarterly backups on its two production servers located in the network room. Currently the backup software in use is Veritas Backup Exec, Version 10.0 rev 5484 and the backup hardware is (1) ADIC FastStor 2 LTO2 Autoloader with 8 tape slots. The software and hardware is installed on and controlled by the server "RRP-DB1". A remote agent is installed on the other production server "RRP-FS1" which is backed-up remotely. Daily, weekly, and month-end backups performed by the Regional Rideshare Program are full backups. Full backups have the advantage that regardless of whether the entire system needs to be restored or only a few files, all of the most current information is located on one tape. The disadvantages of full backups are that many tapes contain redundant information if files do not change frequently (however, the low cost of tape back-up media minimizes this disadvantage) and they are time-consuming (thus the scheduling of these backups for late at night when the servers are not likely to be heavily used). A file's archive bit is changed by the backup software to indicate that the file has been backed up.

Rotation Scheme – Grandfather-Father-Son Method

One of the most commonly used tape rotation schemes is called Grandfather-Father-Son. This scheme uses three media sets, daily, Friday, and monthly.

The first media set "Daily", represents the "Son" in this scheme. The backup job titled "Daily backup" runs "Monday" through "Thursday" at 11:00 PM and performs a full backup. The tapes will be reused (overwritten) the following week.

A second media set "Friday", represents the "Father" in this scheme. The backup job titled "Friday backup" runs each Friday at 11:00 PM and performs a full backup. The tapes will be reused the following month. Note, on each Monday, the previous Fridays tape will be removed and stored off-site.

The final media set "Monthly", represents the "Grandfather" in this scheme. The backup job titled "Monthly backup" runs on the last day of the month at 11:00 PM and perform a full backup. The tapes are removed and stored (archived) for three months. The tapes will be reused quarterly. On the first day of the month the monthly backup tape is removed and stored on a shelf in the server room.

This rotation scheme will back up data on a daily, weekly, and monthly (quarterly) basis. In some instances, upon the direction of the operations manager, a monthly tape may be pulled from the archived data and stored for permanent record retention.

The tape library has a cleaner tape in Slot 8 and cleans the drive automatically a minimum of once a month. The tape library has indicator lights that activate if more cleaning is needed. Cleaner tape is replaced every few months, as needed.

NOTE: Normally, backups are scheduled to run automatically. No manual interaction with the software is required for the three backup jobs. However, to export the Friday and Monthly backup tapes for storage or archival will require minimal software and hardware interaction as described below.

Off-site backup tape storage

One of the foundations of disaster recovery is provision for offsite storage of computer media containing backups of the Regional Rideshare Program data. By storing copies of important data at an offsite location, the RRP minimizes the fallout from unforeseen events at the Regional Rideshare Programs office. On Monday, the previous Friday's backup tape shall be removed from the tape drive, using the process below, and stored off-site. Currently the IT Manager or IT assistant maintains the tapes at his/her residence.

Archival of Tape for Permanent Retention

Two tapes per year will be removed for permanent archive purposes. The two key dates are January 1st (new calendar year) and July 1st (new fiscal year). The Friday tape immediately following the key date will be permanently archived to shelf in the IT room.

Removing tape from the drive

Step	Action
1	Log into RRP-DB1 server and run Backup Exec software ▪ Press KVM switch until #2 is lit ▪ Login Username: [redacted] ▪ Password: (see IT password database)
2	On the desktop launch ***Veritas backup Exec***
3	Select the ***Devices*** button from the top row
4	In the device tree, under *robotic libraries*, select ***Slots*** (you may have to expand (+) the selection to see this)
5	Find the media dated with Fridays date and note the Slot Number
6	***Right-click*** Fridays media and select ***Export***, click ***Run Now*** in the box that pops-up and select ***OK*** in the next box that pops-up
7	In the device tree, under *robotic libraries*, ***right-click – ADIC1*** and select ***Unlock***, click ***Run Now*** in the box that pops-up
7	On backup drive, press ***Next (+)*** until ***Commands*** appears and hit ***Enter***
9	Press ***Next (+)*** until ***Export*** appears and hit ***Enter***
10	Press ***Next(+)*** to ***Slot #*** learned above and hit ***Enter***. The tape will eject!
11	Label tape with Fridays date date, in pencil, and take off-site
12	Insert tape returned from previous week's procedure. The tape will load into the open slot automatically
13	Back at the software, you will notice the slot is labeled ***<Unknown Media>***. ***Right-click*** and select ***Inventory***, click ***Run Now*** in the box that pops-up.
14	Exit Software and log-off server.

- **LOCAL COMPUTERS**
  - **Applications**
    Staff computers are loaded from a PB standard image. Additional software added is Crystal Reports v10 and Filemaker Pro V11.
  - **Restore Procedures**
    Local computers can be restored from standard PB image that was included on DVD with system purchase. The DVDs are maintained in IT manager's office or from PB Corporate.

IT PASSWORD DATABASE

All passwords are stored in an encrypted database file located at [redacted] The password to open the file is known by the IT Manager (Jon Eastlund), and the Operations Manager (Debbie Maus).

POSTAGE METER INSTRUCTIONS

- **Adding Postage**
  See Operations SOP for latest instructions
- **Ordering Supplies**
  Ink and Tape supplies can be ordered through Pitney Bowes
  www.pb.com and search for supplies by model number DM100i

APPENDIX – REFERENCE DOCUMENTS

For security reasons and frequency of updates the following documents are kept out of this SOP and maintained in the following locations.

Letter	Document	File Name/Location
A	RMS Process Guide for System Administrator	R:\Common\RMS\Skinning_Documents\Process_Guides\Sysadmin.pdf
B	RMS Process Guide for Rideshare Administrator	R:\Common\RMS\Skinning_Documents\Process_Guides\Rsadmin.pdf
C	RMS Process Guide for Vanpool Administrators	R:\Common\RMS\Skinning_Documents\Process_Guides\Vpadmin.pdf
D	RMS Process Guide for ETC	R:\Common\RMS\Skinning_Documents\Process_Guides\ETCadmin.pdf
E	RMS Reports	R:\Common\RMS\Skinning_Documents\Process_Guides\reports.pdf
F	RMS Customizations	R:\Common\RMS\Punchlist\BTi Ridematch System punch List
G	Email Group Distribution List	R:\Information_Technology\Email\RRP Email Forwards.xls
H	Skinning Guidelines and Procedures	R:\Common\RMS\Skinning_Documents\Skinning Guidelines.pdf
I	Skinning MOU	R:\Common\RMS\Skinning_Documents\Skinning 511 Ridematch System MOU.doc
J	RMS Event Matching MOU	R:\Common\RMS\EventMatrching_Matching_Documents\guidelines\EventMatchingGuidelines.doc
K	Password Database File	R:\information_technology\passwords\RRPOAKLAND.psafe3
L	Network Diagram	R:\Information_Technology\Diagrams\RRPOakland_Network.vsd
M	Office Cabling Diagram	R:\Information_Technology\Diagrams\RRP_Data_Cable_Plan.jpg